

IN THE CLAIMS

Claim 1 (currently amended) A method of forwarding packets in a communication system having multiple incoming and output service interfaces providing service to multiple user networks ports, said method comprising:

providing said system with multiple forwarding rules said rules based on routing information tables;

receiving said packets at one of said incoming service interfaces ports;

selecting an appropriate forwarding table rule based on a source destination address in said packets; and

forwarding said packets to one of said output service interfaces ports based on a destination address in said packets and information in said appropriate forwarding rules tables.

Claim 2 (currently amended) The method as defined in claim 1 wherein said packets are received at said ports by services interfaces support which define realms each relating to a specific instance of an internetworking service function.

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Claim 3 (currently amended) The A method as defined in claim 2 wherein said specific instance is a public Internet access service.

Claim 4 (currently amended) The A method as defined in claim 2 wherein said specific instance is a virtual private network (VPN) service.

Claim 5 (currently amended) The A method as defined in claim 2 wherein said VPN service is a bridged and/or routed connectivity service.

Claim 6 (currently amended) The A method as defined in claim 2 wherein said VPN service is a network layer connectivity service.

Claim 7 (currently amended) The A method as defined in claim 1 wherein said communication system internetworking devices include includes an ATM transport fabric backplane.

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Claim 8 (currently amended) A packet forwarder forwarding entity for a communication system comprising:

a plurality of user networks ports;

multiple service interfaces providing instances of service input to said user networks ports; said service interfaces including source and destination addresses;

multiple forwarding tables route servers for calculating multiple forwarded rules relating to instances of service defining isolated realms to which said service interfaces belong based on customer said source information; and

edge forwarders forwarding means to direct said service interfaces to user networks an appropriate port based on the destination address and information in said forwarding rules table.

Claim 9 (cancelled)

Claim 10 (currently amended) The A packet forwarding entity forwarder as defined in claim 8 wherein said instances of service isolated realms are assigned to specific network users.

Claim 11 (currently amended) The A packet forwarding entity forwarder as defined in claim 8 wherein service interfaces relate to physical and logical connections.

Claim 12 (currently amended) The A packet forwarding entity forwarder as defined in claim 8 wherein said logical connections include multiple traffic flows from one or more ingress ports.

Claim 13 (currently amended) The A packet forwarding entity forwarder as defined in claim 8 wherein said one of said isolated realms relate to a specific instances of services is an internetworking service function.

Claim 14 (currently amended) The A packet forwarding entity system as defined in claim 13 wherein said internetworking service function is a Public Internet access service.

Claim 15 (currently amended) The A packet forwarding entity system as defined in claim 13 wherein said internetworking service function is a virtual private network (VPN) service.

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Claim 16 (currently amended) The A packet forwarding entity system as defined in claim 15 wherein said VPN service is a bridged and/or routed connectivity service.

Claim 17 (currently amended) The A packet forwarding entity system as defined in claim 16 wherein said internetworking service functions are provided over an ATM network.

Claim 18 (currently amended) The A packet forwarding entity system as defined in claim 16 wherein said internetworking devices support multiple protocols.

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Claim 19 (currently amended) The A packet forwarding entity system as defined in claim 18 wherein said internetworking devices provide services at both the packet and frame levels.

Claim 20 (currently amended) The A packet forwarding entity system as defined in claim 19 wherein said internetworking services are managed by a single service provider.

Claim 21 (currently amended) The A packet forwarding entity system as defined in claim 18 +9 wherein said multiple protocols include over ATM (MPOA) service via includes a MPOA client lookup cache management function.

Claim 22 (cancelled)